

Notice of Allowability

Application No.

10/535,675

Examiner

Phuong Huynh

Applicant(s)

FROHLICH ET AL.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed on January 30, 2007.
2. ☒ The allowed claim(s) is/are 12-16 and 18-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20070213</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Felix D'Ambrosio on February 16, 2007.

The application has been amended as follows:

- Claim 12:

At line 16, after "deviation," delete "it is recognized" and insert --at least one of the following is recognized: --";

At lines 17, 19 and 21, delete "and/or";

At lines 17,18, 20, 22, and 24, delete "whether";

At line 23, delete "and/or", insert --and--.

- Claim 18:

At lines 15, after "deviation," delete "it is recognized" and insert --at least one of the following is recognized: --";

At lines 16, 18, and 20, delete "and/or";

At lines 16, 17, 19, 21 and 23, delete "that";

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At line 22, delete "and/or", insert --and--.

Allowable Subject Matter

2. Claims 12-16 and 18-22 are allowed.

The following is an examiner's statement of reasons for allowance:

Letton (U.S. Patent No. 6,209,388) discloses an apparatus and related method for measuring the properties and individual flow rates of a two-phase flow comprising a gas and a liquid is disclosed. This apparatus and related method also can determine whether the liquid is traveling in primarily a mist or stratified flow. More precisely, one embodiment of the disclosed invention uses measured parameters such as gain, standard deviation in upstream and downstream travel times for an ultrasonic signal, measured speed of sound, noise, signal quality, batch failure rate, and velocity profile to infer the amount of liquid in the gas flow, and in what form the liquid is traveling. For a horizontal two-phase flow, an internal measurement can be used as a dry gas reference, although the invention is also applicable to a vertical flow [see Letton: Abstract; col. 1, lines 48-50; and col. 8, lines 4-11].

Eryurek et al. (hereinafter "Eryurek") (U.S. Patent Application Pub. No. 2002/0029130) discloses flow diagnostic system for a flow sensing element and impulse lines. A pressure transmitter coupled to the impulse lines provides digital pressure data to a control system. The control system provides the pressure

data and real time clock readings to a diagnostic application. The diagnostic application calculates a difference between current pressure data and its moving average. A condition of the primary element or impulse lines is diagnosed from a current pressure data set relative to an historical data set. The diagnostic application is downloadable from an application service provider (ASP). The application can run on the control system, a remote computer or the ASP. A diagnostic report is preferably provided [see Eryurek: Abstract; Paragraphs [0035]-[0037]].

Regarding claims 12 and 18, the prior art of records fails to disclose that following limitations:

"on the basis of the deviation, at least one of the following is recognized: the containment is not filled with the medium, the coupling of the ultrasonic transducers to the containment is defective, the damping of the measuring signals by the medium located in the containment exceeds a predetermined maximum value, an air gap between the containment and a liner on the inner surface of the containment is present, and the damping of the measuring signals in the wall of the containment."

Claims 13-16 and 19-22 depend from allowed claims 12 and 18 respectively and therefore are also allowed.

Conclusion

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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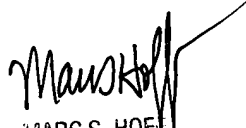
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Huynh whose telephone number is 571-272-2718. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Huynh
Examiner
Art Unit 2857

PH
February 13, 2007


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